

Chapter 22

Impact of IDM on Healthcare

Lena Stephanie

Nanyang Technological University, Singapore

Thomas Srinivasan

Nanyang Technological University, Singapore

Apurva Deepak Lawale

Nanyang Technological University, Singapore

ABSTRACT

This chapter discusses the impact of interactive digital media (IDM) on the healthcare industry. An overview of the e-health marketplace and business models is provided through a blended approach utilizing two conceptual frameworks, namely ADVISOR and Value Net. Significant macro-environmental forces impacting e-health initiatives are identified through PESTLE analysis for the reason that it is crucial for an e-health firm's business model success and sustainability, to strategize and align itself favorably with these powerful forces of change.

INTRODUCTION

“E-revolution” has transformed the conventional landscape of business and consumerism, as is evident through the successful take-offs of various e-initiatives over the last couple of decades. Today, the Internet has become entwined with most aspects of our day-to-day living, facilitating communication, entertainment, education, banking and a host of ecommerce transactions online. The power of the Internet is so vast that its use

has become pervasive and routinized in only about 7 years. Comparatively, television took about 26 years to achieve a similar mass penetration among consumers in the US (Chin, 2000).

Despite the Internet having revolutionized most walks of our lives, its foray into healthcare has been relatively tardy (Hill & Powell, 2009). Healthcare is a late arrival to e-commerce, although most analysts agree that the long-term potential for online health is still enormous (Dyer & Thompson, 2001). An estimated 18.3 million US adults purchasing health-related products online

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in 2006, and the rise in the US population looking for health information online from 10 million in 2000 to 100 million in early 2007¹, are testimony to healthcare consumers' insatiable need for easier and greater access to health information and services (Wen & Tan, 2003). Coupled with this is the policy imperative of various governments to reform healthcare through sizable investments in health information technology (HIT) to accelerate improvements in healthcare, (c.f. Clancy et al., 2009). Such healthcare trends are not just confined to the US, but are gaining traction globally, as can be evidenced by the plethora of e-health or telehealth or telemedicine projects that have stemmed worldwide in the recent years².

E-health, which is the integration of telehealth³ or telemedicine technologies with the Internet, is deemed to improve efficiencies, develop new markets, reduce costs, and enhance the quality and value of health services delivery (Wen & Tan, 2003). "E-health is an emerging field in the intersection of medical informatics, public health and business, referring to health services and information delivered or enhanced through the Internet and related technologies" and "encompasses more than just "Internet and Medicine"" (Eysenbach, 2001, p 20). E-health comes with the promise of improved quality of care, reduced costs, reduced medical errors, increased efficiency of information flow and most importantly, empowerment of healthcare consumers in their healthcare decisions.

In this paper, we will attempt to (1) understand the evolving e-health ecosystem, and (2) analyze the impacts of the macro-environment on this "disruptive innovation", which is set to revolutionize the way healthcare will be provided and consumed. To achieve these objectives, our research will focus on the following research questions:

1. What is the current status of the e-health ecosystem?
2. What are the impacts of the macro-environmental forces on e-health and their significance?

Finally, in our Conclusion, we will discuss the prospects of e-health gaining acceptance and becoming a way of life eventually.

BACKGROUND

The E-Health Ecosystem

In this section we present a synthesis of key observations made during the course of our review of diverse literature discussing the e-health ecosystem from different perspectives.

Health data will be the asset that drives efficient, high-quality, value-based, evidence-focused medicine (Neupert, 2009). The opportunity for an e-health firm is in evidence-based medicine which is defined as "the conscientious, explicit and judicious use of current best evidence in making decisions about the care of individual patients" (Sackett et al., 1996, p 71). To tap this opportunity, an e-health firm must harness the combined power of technology and the Internet, to create a patient-centric health network that is seamlessly connected for exchange and reuse of health information. A totally "connected" health network is one that encompasses all the key stakeholders and provides a common platform for interfaces and transactions among them.

An e-health ecosystem broadly comprises four key stakeholders namely e-health providers (e.g. hospitals), e-health vendors (e.g. pharmacies), e-health payers (e.g. insurance companies) and e-health consumers (e.g. patients). E-health systems facilitate quick and easy access to information for all stakeholders involved in e-healthcare processes, such as patients, physicians, healthcare providers, healthcare vendors, and healthcare insurers (Wen & Tan, 2003). A typical e-health ecosystem is depicted in Figure 1.

We infer that in terms of information flow, the stakeholders on the e-health network primarily assume 3 roles: while some play the role of "suppliers" of health information to the network, some

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